

# Notice of Allowability

Application No.

10/771,396

Examiner

Rip A. Lee

Applicant(s)

HOJO ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to January 4, 2006.
2. ☒ The allowed claim(s) is/are 1-5 and 7-12.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance: Claims 1-5 and 7-12 are allowed over the closest references cited below.

The present invention is drawn to a tire comprising a tread made from a rubber composition comprising: (1) a rubber component comprising a styrene-butadiene copolymer rubber having vinyl bond content of not less than 30 % and a bound styrene content of more than 30 mass % but not more than 60 mass %, and (2) at least one compound selected compounds represented by formula (I), (II), (III), or (IV) and (3) an organic (di)thiosulfate represented by formula (V); see claims for structural details.

Araki (JP 2002-069236) discloses a rubber composition comprising 100 pw of a rubber component such as polybutadiene rubber or styrene-butadiene rubber, 0.1-1.0 pw of a thiuram compound or a dithiocabamate compound, and 0.5-2.0 pw of sodium 1,6-hexamethylene dithiosulfate dehydrate which is useful for the manufacture of a retreaded (pneumatic) tire. The patent does not teach use of the particular SB rubber of the instant claims.

Fujiki (JP 10-195237) teaches use of sodium 1,6-hexamethylene dithiosulfate dehydrate as the vulcanization agent for styrene-butadiene rubber. According to the inventor, the heat resistant aging characteristic of the rubber is maximized when the styrene-butadiene rubber has a vinyl content of 35-85 % and when the styrene content is 30 % or less. The patent does not teach use of SB rubber having a styrene content of 30-60 wt %.

Yamagishi *et al.* (JP 2002-362107) discloses use of sodium 1,6-hexamethylene dithiosulfate in conjunction with tetramethyl thiuram monosulfide in polybutadiene compositions. The prior art does not teach or suggest the subject matter of the instant claims.

KR 2002-49429 discloses use of 1-3 phr of sodium 1,6-hexamethylene dithiosulfate and 0.1-0.5 phr of a thiuram-based vulcanization accelerator for curing natural rubber. The prior art does not teach or suggest the subject matter of the instant claims.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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January 12, 2006

  
DAVID W. WU  
SENIOR PATENT EXAMINER  
TECHNOLOGY CENTER 1700